

### **Patent claims**

1. An arrangement for controlling a device (1), in particular items of fitness equipment, items of equipment for motion therapy or the like, having at least one actuating device (2) which can be moved about and/or along an axis, characterized in that the at least one actuating device (2) can be driven for simulating an active load.
2. The arrangement as claimed in claim 1, characterized in that a drive (3), in particular an electric motor, is assigned to the device (1), in particular for producing the active load.
3. The arrangement as claimed in claim 1 or 2, characterized in that a gear unit (4) is arranged between the device (1) and the drive (3).
4. The arrangement as claimed in at least one of claims 1 to 3, characterized in that, for continuously and permanently detecting, in particular measuring, a manual load applied externally to the device (1), in particular the actuating device (2), a sensor (5), in particular a force sensor, is assigned to the device (1) and/or the actuating device (2) and/or the gear unit (4).
5. The arrangement as claimed in at least one of claims 1 to 4, characterized in that, to simulate an active load, the actuating device (2) can be moved about and/or along the at least one axis (X, Y, Z) with a permanently selectable and continuously adjustable, if need be variable, force (F) and variable path (S).
6. The arrangement as claimed in at least one of claims 1 to 5, characterized in that a simulation of an active load and a determinable movement of the actuating device (2) are effected in a program-controlled manner.

7. The arrangement as claimed in at least one of claims 1 to 6, characterized in that a simulation, in particular an active movement of the actuating device (2) is effected individually in a program-controlled manner and in such a way as to be specific to the user.

8. The arrangement as claimed in at least one of claims 1 to 7, characterized in that, for the active movement and control of the actuating device (2), in particular for the simulation of the active load, the manually applied load at the actuating device (2) can be determined and, in the event of determinable differences between active load and manually applied load, the active load or simulation is corrected automatically and in a program-controlled manner.

9. The arrangement as claimed in at least one of claims 1 to 8, characterized in that control of the actuating device (2), in particular a simulation of an active load, such as force, speed of the actuating device (2), length of path covered, can be varied during operation, if need be, via a signal of a pulse sensor (7) and/or a signal of a blood-pressure sensor (8).

10. The arrangement as claimed in at least one of claims 1 to 9, characterized in that the manual load applied to the actuating device (2) can be stored permanently on a data carrier, in particular a chip card (9) or personal computer (6), and can be reused as reference values for renewed training or a renewed therapy for increasing or modifying and evaluating a therapy or training.

11. The arrangement as claimed in at least one of claims 1 to 10, characterized in that a comparison between the manual load to actually be applied to the actuating device (2) and manual load actually applied to the actuating device (2) is effected by means of at least one sensor, the active load, if need be, being corrected automatically and in a program-controlled manner.